Amendments to the Claims:

The following listing of claims will replace all prior versions, and listings, of claims in the application:

1-9. (Canceled)

10. (Original) A method of operating a sensing circuit comprising a charge integrator circuit, coupled in series with a discriminator circuit and arranged to receive an electrical charge stored in a capacitor element of an array of capacitor elements each for storing an electrical charge, the method comprising applying a first pulse signal to the said capacitor element and to selected other capacitor elements in the array, applying a second pulse signal to the said capacitor element and to selected other capacitor elements in the array, applying third and fourth pulse signals to selected other capacitor elements in the array, the first, second, third and fourth pulse signals being arranged to cause the electrical charge stored in the said capacitor element to be transferred to the charge integrator circuit but not to cause charge stored in other capacitor elements to be transferred to the charge integrator circuit.

11. (Original) A method according to claim 10, wherein the second and third pulse signals are provided from a common signal source with one of the signals being provided via an inverter circuit.

12. (Previously Presented) A method according to claim 10, wherein the first pulse signal has a duration shorter than the second pulse signal.

13. (Previously Presented) A method according to claim 10 wherein the capacitor elements are selected to comprise ferroelectric capacitor elements and the first and second pulse signals are arranged to cause the said capacitor element to change from a first polarization state to a second polarization state to transfer the electrical charge to the charge integrator circuit.

14. (Previously Presented) A method according to claim 10, wherein the charge integrator circuit is selected to comprise an amplifier having a feedback capacitor coupled between an input and an output of the amplifier, and providing first switching means for coupling one side of the feedback capacitor to a first electrical supply, and second switching means for coupling the other side of the feedback capacitor to a further electrical supply.

15. (Original) A method according to claim 14, wherein the first electrical supply is selected to be virtual ground and the further electrical supply is selected to be a positive supply voltage, and wherein the method comprises closing the first and second switching means so as to precharge an output terminal of the charge integrator circuit to the positive supply voltage prior to commencement of a sensing cycle.

16. (Previously Presented) A method according to claim 10, wherein the discriminator circuit is selected to comprise a comparator circuit having a first input arranged to receive an output signal from the charge integrator circuit and a second input arranged to receive a reference voltage signal.

17. (Previously Presented) A method according to claim 10, wherein the discriminator circuit is selected to comprise an inverter circuit arranged to provide an output signal which changes from a first level to a second level less than the first level when the magnitude of an output signal from the integrator circuit exceeds a reference value.

18. (Previously Presented) A method according to claim 10 comprising providing first switching means for selectively coupling an input of the charge integrator circuit to the capacitor element.

19. (Original) A method according to claim 18 comprising providing further switching means for coupling the first switching means to a bit line driver circuit.

20. (Previously Presented) A method according to claim 10 comprising feeding an output signal from the discriminator circuit to a first input of an enable circuit and

providing a further signal to a second input of the enable circuit, thereby to provide an output signal indicative of the electrical charge on the capacitor element in response to the further signal.

21. (Previously Presented) A method according to claim 20, comprising providing the further signal to the enable circuit during the application of the voltage pulse across the ferroelectric capacitor.

22. (New) A method of operating a sensing circuit comprising a charge integrator circuit coupled to a first and second group of a plurality of capacitor elements and a discriminator circuit, the method comprising transferring a first electrical charge stored in a first capacitor element of the first group, and during the transferring of the first electrical charge, a second electrical charge stored in a second capacitor element of the second group is not being transferred to the charge integrator circuit.

23. (New) A method according to claim 22, further comprising supplying a first signal to the first capacitor element during at least part of a first period of the transferring of the first electrical charge.

24. (New) A method of according to claim 23, further comprising supplying a second signal to the second capacitor during at least part of the first period.

25. (New) A method according to claim 24, further comprising supplying a third signal to at least one of the first capacitor or the second capacitor.

26. (New) A method according to claim 25, in which said capacitor elements comprise ferroelectric capacitors, said method further comprising controlling the polarization state of the first or second capacitor by the second signal and the third signal.

27. (New) A sensing circuit for sensing an electrical charge comprising:

a charge integrator circuit coupled to an electrode for storing the electrical charge through a switching element, and

a discriminator circuit coupled in series with the charge integrator circuit, the discriminator circuit having a first input arranged to receive an output signal from the charge integrator circuit.

28. (New) A sensing circuit as claimed in claim 27, in which said discriminator circuit further comprises a second input arranged to receive a reference voltage signal.

29. (New) A sensing circuit for sensing an electrical charge comprising:

a charge integrator circuit coupled to an electrode for storing the electrical charge; and

a discriminator circuit coupled in series with the charge integrator circuit, the discriminator circuit having a first input arranged to receive an output signal from the charge integrator circuit,

the charge integrator circuit including an amplifier, a feedback capacitor coupled between an input terminal and an output terminal of the amplifier for storing the electrical charge received from the electrode, first switching means coupled to one side of the feedback capacitor for connecting the said one side to a first electrical supply and second switching means coupled to the other side of the feedback capacitor for coupling the said other side to a further electrical supply.

30. (New) A sensing circuit according to claim 27, wherein the discriminator circuit comprises a comparator circuit having a first input arranged to receive the output signal from the integrator circuit and a second input arranged to receive a reference voltage signal.

31. (New) A sensing circuit for sensing an electrical charge comprising:

a charge integrator circuit coupled to an electrode for storing the electrical charge; and

a discriminator circuit coupled in series with the charge integrator circuit, the discriminator circuit having:

a first input arranged to receive an output signal from the charge integrator circuit, and

an inverter circuit arranged to provide an output signal indicative of the electrical charge.

32. (New) A sensing circuit for sensing an electrical charge comprising:

a charge integrator circuit coupled to an electrode for storing the electrical charge; and

a discriminator circuit coupled in series with the charge integrator circuit, the discriminator circuit having a first input arranged to receive an output signal from the charge integrator circuit,

said sensing circuit further comprising an enable circuit arranged to receive an output signal from the discriminator circuit on a first input and to provide an output signal indicative of the electrical charge in response to a further signal received on a second input.

33. (New) A sensing circuit as claimed in claim 32, in which said enable circuit comprises an AND circuit.

34. (New) A sensing circuit according to claim 27, wherein the electrode comprises an electrode of a capacitor element.

35. (New) A sensing circuit according to claim 34, wherein there are a plurality of a capacitor elements.

36. (New) A sensing circuit according to claim 35, wherein the plurality of capacitor elements comprise at least one of a ferroelectric capacitor, a ferroelectric gate transistor, or a charge coupled device.

37. (New) A sensing circuit according to claim 27, wherein the electrode comprises an electrode of a ferroelectric capacitor, a ferroelectric gate transistor, or a charge coupled device.

38. (New) A biosensor comprising, a sensing circuit according to claim 27.

39. (New) A biosensor according to claim 38 comprising a DNA sensor.

40. (New) A biosensor according to claim 38 comprising a fingerprint sensor.